SNOW DEVIL™

TWO STAGE GAS SNOW THROWER

MODEL DB7659B-22

Questions, problems, missing parts? If you have questions or need technical support, call the Amerisun customer service department at 1-800-791-9458 or visit Amerisuninc.com and e-mail support@amerisuninc.com.

WARNING! Read and follow all safety rules and instructions in this manual before attempting to operate this machine. Failure to comply with these instructions may result in personal injury. Save these instructions. This unit is equipped with an internal combustion engine and may spark resulting in fire or explosion if used near combustible material or fluid. Only use when the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). The spark arrester shall be maintained in effective working order by operator.

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DISCLAIMER

The information contained within this manual is the latest information as of the publication date. All content and images are subject to change without notice. This manual is intended as a guide.

SAFETY

This symbol points out important safety instructions which, if not followed, could endanger the personal safety and or property of yourself and others. Read and follow all instructions in this manual before attempting to operate this machine. Failure to comply with these instructions may result in personal injury.

WARNING! This machine was built to be operated according to the safe operation practices in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. This machine is capable of amputating fingers, hands, toes and feet and throwing foreign objects. Failure to observe the following safety instructions could result in serious injury or death.

It is your responsibility to restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.

SAVE THESE INSTRUCTIONS!

Training

Read, understand, and follow all instructions on the machine and in the manual(s) before attempting to assemble and operate. Keep this manual in a safe place for future and regular reference.

- Be familiar with all controls and their proper operation. Know how to stop the machine and disengage them quickly.
- Never allow children under 14 years of age to operate this machine. Children 14 and over should read and understand the instructions and safe operation practices in this manual and on the machine and be trained and supervised by an adult.
- Never allow adults to operate this machine without proper instruction.
- Thrown objects can cause serious personal injury. Plan you snow-throwing pattern to avoid discharge of material toward roads, bystanders and the like.
- Keep bystanders, pets and children at least 75 feet from the machine while it is in operation. Stop machine if anyone enters the area.
- Exercise caution to avoid slipping or falling, especially when operating in reverse.

Preparation

Thoroughly inspect the area where the equipment is to be used. Remove all doormats, newspapers, sleds, boards, wires and other foreign object, which could be tripped over or thrown by the auger /impeller.

- Always wear safety glasses or eye shields during operation and while performing an adjustment or repair to protect your eyes, thrown objects which ricochet can cause serious injury to the eyes.
- Do not operate without wearing adequate winter outer garments. Do not wear jewelry, long scarves or other loose clothing, which could become entangled in moving parts, wear footwear which will improve footing on slippery surfaces.
- Use a grounded three-wire extension cord and receptacle for all machines with electric start engines.
- Adjust collector housing height to clear gravel or crushed rock surfaces.
- Disengage all control levers before starting the engine.
- Never attempt to make any adjustments while engine is running, except where specifically recommended in the operator's manual.
- Let engine and machine adjust to outdoor temperature before starting to clear snow.

Personal Safety

- Engine exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to cause cancer, birth defects or other reproductive harm.
- Read, understand and follow all instructions on your Snow Thrower and in this Operator's Manual before attempting to assemble and operate your machine.
- Keep this manual in a safe place for future and regular reference. If replacement parts are needed, refer to the manual.
- Be familiar with all controls and their proper operation. Know how to stop the machine and disengage the controls quickly.
- Never allow children under 14 years old to operate your Snow Thrower. Children 14 years and older should read and understand the Operator's Manual instructions and safety rules. Children over 14 years should be trained and supervised by a parent.
- Never allow adults to operate this machine without proper instruction.
- Thrown objects can cause severe bodily injury. Plan your snow-throwing pattern to avoid discharge of material toward roads, bystanders and the like.
- Keep bystanders, helpers, pets and children from your Snow Thrower while it is in operation. Stop the machine if anyone enters this area.

- Exercise caution to avoid slipping or falling, especially when operating in reverse.
- Stay alert, watch what you are doing and use common sense when operating your Snow Thrower.
- Do not use your Snow Thrower while you are tired or under the influence of drugs, alcohol, medication. A moment of inattention while operating the Snow Thrower may result in severe bodily injury.
- NEVER LEAVE YOUR RUNNING SNOW THROWER UNATTENDED. Stop the engine.
- Do leave your Snow Thrower until it has come to a complete stop.
- When stepping backwards, be cautious about any obstacles beneath your feet or behind you avoid falling.

Service

- Stop the engine before making any adjustments. Check for misalignment, breakage of or binding of moving parts, and any other conditions that may affect operation.
- If damaged, have the Snow Thrower serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the Snow Thrower is maintained.

Safe handling of gasoline

To avoid personal injury or property damage use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Serious personal injury can occur when gasoline is spilled on yourself or your clothes which can ignite, wash your skin and change clothes immediately.

- Use only an approved gasoline container.
- Extinguish all cigarettes, cigars, pipes and other sources of ignition.
- Never fuel machine indoors.
- Never remove gas cap or add fuel while the engine is hot or running.
- Allow engine to cool at least two minutes before refueling.
- Never over fill fuel tank.Fill fuel to no more than 112 inch below bottom of filler neck to provide space for fuel expansion.
- Replace gasoline cap and tighten securely.
- If gasoline is spilled, wipe it off the engine and equipment. Move machine to another area. Wait 5 minutes before starting the engine.
- Never store the machine or fuel container inside where there is an open flame, spark or pilot light (e.g. furnace, water heats, space heater, clothes dryer etc.).
- Allow machine to cool at least 5 minutes before storing.
- Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.
- If possible, remove gas-powered equipment from the truck or trailer and refuel it on the ground.
- If this is not possible, then refuel such equipment on a trailer with a portable container, rather than from a gasoline dispenser nozzle.
- Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock open device.

Operation

- Do not put hands or feet near rotating parts, in the auger impeller housing or chute assembly. Contact with the rotating parts can amputate hands and feet.
- The auger impeller control lever is a safety device. Never bypass its operation. Doing so makes the machine unsafe and may cause personal injury.
- The control levers must operate easily in both directions and automatically return to the disengaged position when released.
- Never operate with a missing or damaged chute assembly. Keep all safety devices in place and working.
- Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas,
- Do not operate machine while under the influence of alcohol or drugs.
- Muffler and engine become hot and can cause a bum. Do not touch. Keep children away.
- Exercise extreme caution when operating on or crossing gravel surfaces. Stay alert for hidden hazards or traffic.
- Exercise caution when changing direction and while operating on slopes.
- Plan your snow-throwing pattern to avoid discharge towards windows, walls, cars etc. Thus, avoiding possible property damage or personal injury caused by a ricochet.
- Never direct discharge at children, bystanders and pets or allow anyone in front of the machine.
- Do not overload machine capacity by attempting to clear snow at too fast of a rate.
- Never operate this machine without good visibility or light. Always be sure of your footing and keep a firm hold on the handles. Walk, never run.
- Disengage power to the auger impeller when transporting or not in use.
- Never operate machine at high transport speeds on slippery surfaces. Look down and behind and use care when backing up.

- If the machine should start to vibrate abnormally, stop the engine, disconnect the spark plug wire and ground it against the engine.Inspect thoroughly for damage. Repair any damage before starting and operating.
- Disengage all control levers and stop engine before you leave the operating (behind the handles).
- Wait until the auger /impeller comes to a complete stop before unclogging the chute assembly, making any adjustments, or inspections.
- Never put your hand in the discharge or collector openings. Always use the dean-out tool provided to unclog the discharge opening. Do not unclog chute assembly while engine is running. Shut off engine and remain behind handles until all moving parts have stopped before unclogging.
- Use only attachments and accessories approved by the manufacturer (e.g. wheel weights, tire chains, cabs etc.).
- When staring engine, pull cord slowly until resistance is felt, then pull rapidly, Rapid retraction of starter cord (kickback) will pull hand and arm toward engine faster than you can let go. Broken bones, fractures, bruises or sprains could result.
- If situations occur which are not covered in this manual, use care and good judgment contact customer support for assistance.

Maintenance & Storage

- Never tamper with safety devices. Check their proper operation regularly. Refer to the maintenance and adjustment sections of manual.
- Before cleaning, repairing, or inspecting machine disengage all control levers and stop the engine.
- Wait until the auger impeller come to a complete stop. Disconnect the spark plug wire and ground against the engine to prevent unintended starting.
- Check bolts and screws for proper tightness at frequent intervals to keep the machine in safe working condition. Also, visually inspect machine for any damage.
- Do not change the engine governor setting or over-speed the engine. The governor controls the maximum safe operating speed of the engine.
- Snow thrower shave plates and skid shoes are subject to wear and damage. For your safety protection, frequently check all components and replace with original equipment manufacturers (OEM) parts only. Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety.
- Check control levels periodically to verify they engage and disengage properly and adjust, if necessary. Refer to the adjustment section in this operator's manual for instructions.
- Maintain or replace safety and instruction labels, as necessary.
- Observe proper disposal laws and regulations for gas, oil, etc. to protect the environment.
- Prior to storing, run machine a few minutes to clear snow from machine and prevent freeze up of auger impeller.
- Never store the machine or fuel container inside where there is an open flame,spark or pilot light such as water heater, furnace, clothes dryer etc.
- Always refer to the operator's manual for proper instructions on off-season storage.
- Check fuel line, tank, cap and fittings frequently for cracks or leaks. Replace if necessary.
- Do not crank engine with spark plug removed.
- Have the machine inspected annually by an authorized service dealer to ensure that all mechanical and safety systems are working properly and do not worn excessively. Failure to do so can result in accidents, injuries or death.

Do Not Modify The Engine

To avoid serious injury or death, do not modify engine in any way. Tampering with the governor

setting can lead to a runaway engine and cause it to operate at unsafe speeds. Never tamper with factory setting of engine governor.

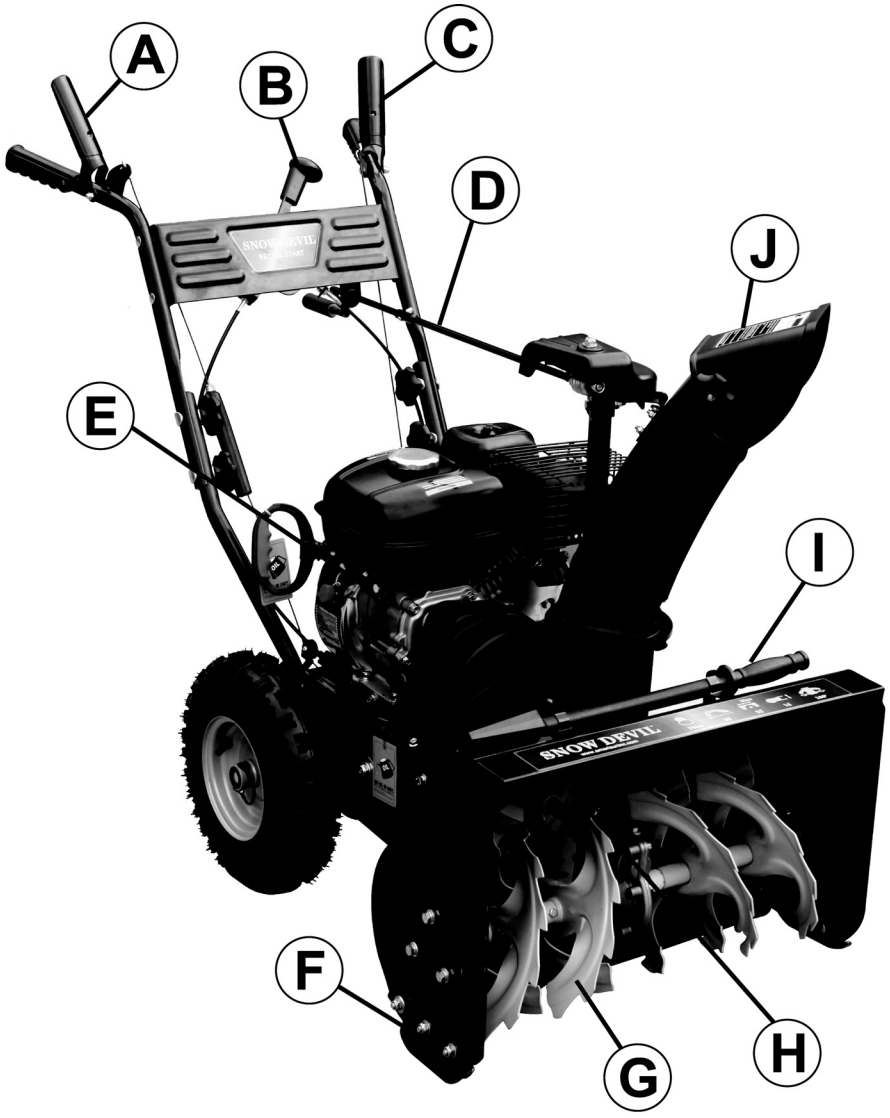
Safety Symbols

This page depicts and describes safety symbols that may appear on this product. Read, understand and follow all instructions on the machine before attempting to assemble and operate.

	READ THE OPERATOR'S MANUAL(S) Read, understand and follow all instructions in the manual(s) before attempting to assemble and operate		WARNING- ROTATING BLADES Keep hands out of inlet and discharge openings while machine is running. There are rotating blades inside
	Use ear protection		Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice
	Use eye protection		Keep children at a distance of not less than 10m from the work area
	WARNING-ROTATING AUGER Do not put hands or feet near rotating parts, in the auger/impeller housing or chute assembly, Contact with the rotating parts can amputate hands and feet		WARNING-GASOLINE IS FLAMMABLE Allow the engine to cool at least two minutes before refueling
	WARNING-ROTATING BLADES Keep hands out of inlet and discharge openings while machine is running. There are rotating blades inside		WARNING-CARBON MONOXIDE Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas
	WEARING-THROWN OBJECTS This machine may pick up and throw objects which can cause serious personal injury.		WARNING-ELECTRICAL SHOCK (for engine with electric starter) Do not use the engine's electric starter in the rain
	Do not touch any rotating part before machine stops		

FEATURE IDENTIFICATION

TECHNICAL SPECIFICATIONS
Clearing Width: DB7659B 22 inches
Clearing Height: 16 inches
4 Forward and 2 Reverse Speeds
Engine Displacement: 196 cc, 4 stroke



A - Drive Control Handle	E - Engine	I - Snow/Ice Clean Out Tool
B - Speed Control Lever	F - Skid Shoe	J - Chute Assembly
C - Auger Control Handle	G - Augers	-
D - Chute Rotation Handle	H - Impeller	-

A. Drive Control Handle

Located on the right side of the upper handle, the Drive Control is used to engage and disengage the drive wheels. Squeeze the Drive Control handle against the upper handle to engage the wheels; release to disengage.

B. Speed Control Lever

The Speed Control Lever is located in the center of the panel and is used to set the drive speed and direction of travel. It can be moved into any of six positions.

C. Auger Control Handle

Located on the left side of the upper handle, the Auger Control is used to engage and disengage the augers. Squeeze the Auger Control to engage the augers; release to disengage the augers.

D. Chute Rotation Handle

To adjust snow discharge direction, rotate the handle clockwise or counter-clockwise.

E. Engine

See the Engine Manual for engine operation information.

F. Skid Shoe

Position the shoes based on the surface conditions. Adjust upward for hard-packed snow. Adjust downward when operating on gravel or crushed rock surfaces.

G and H. Augers and Impeller

When engaged, the augers rotate to cut snow and direct it into the impeller housing to be discharged out the chute.

I. Snow/Ice Clean Out Tool

The chute Clean-out Tool is conveniently fastened to the rear of the auger housing with a mounting clip. It is used to clean the chute assembly and chute opening when snow and ice become lodged.

WARNING! Never use your hands to clear a clogged chute assembly. Shut off engine and remain behind handles until all moving parts have stopped before unclogging.

J. Chute Assembly

The chute provides a discharge path for snow being thrown. The chute is adjustable.

Shave Plate (not shown)

The Shave Plate maintains contact with pavement as the snow thrower is propelled, allowing snow close to pavement's surface to be discharged.

BOX CONTENTS

Check to ensure all of the following items are included:

- Snow Thrower (1)
- Chute Assembly (discharge chute, chute rotation bar, gear assembly, lower chute crank rod and hardware)
- Chute Deflector and hardware
- Upper Chute Crank Rod and hardware
- Lower Handles (2 pieces and hardware)
- Wheel Assembly (2 pieces and retaining pins)
- Snow/Ice Clean Out Tool (1)

Located in Accessory Parts Bag:

- Skid Shoes (2 pieces and hardware)
- Speed Control Cable Clips (3)
- Oil Funnel (1)
- Spark Plug Wrench (1)
- Spare Auger Shear Pins (2)
- Operator's Manual (1)
- Engine Manual (1)
- Registration Card (1)

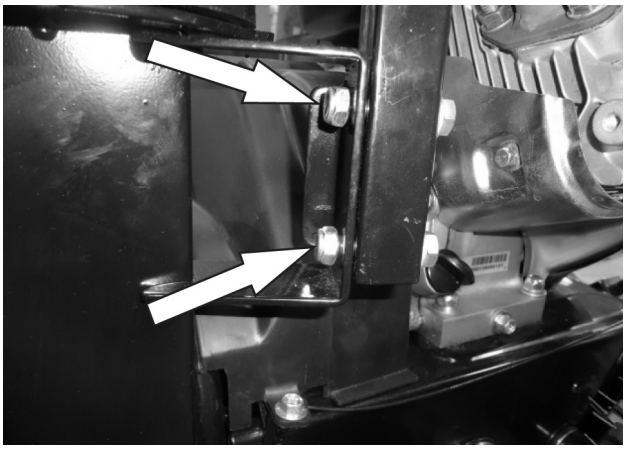
ASSEMBLY

Your Snow Thrower will require some assembly. Please complete the following steps before using your Snow Thrower. For easy assembly, we recommend attaching the components in the order listed in this manual.

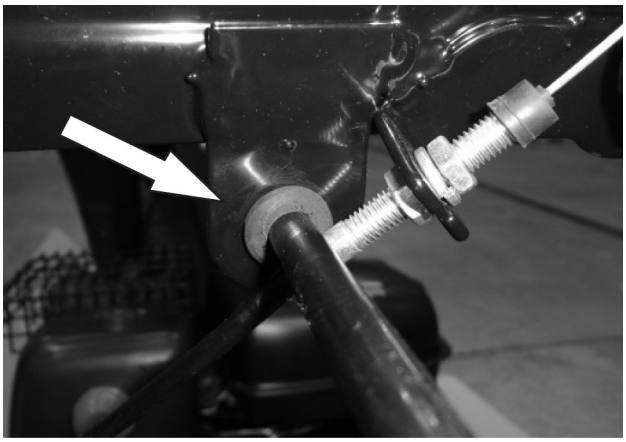
Chute Assembly

1. Install the discharge chute onto the chute flange on the housing. The chute only rests on the flange.

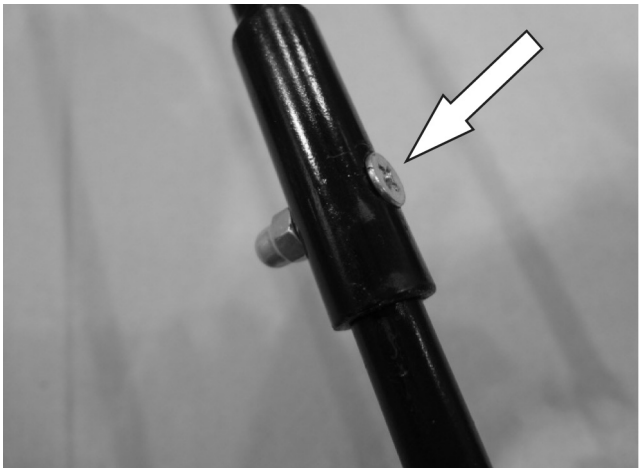
2. Attach the chute rotation bar to the mount bracket onto the chute housing using two hex screws, washers and locknuts. Tighten fasteners securely.



3. Slide the upper chute crank rod through the mounting hole under the control panel and into the lower chute crank rod.



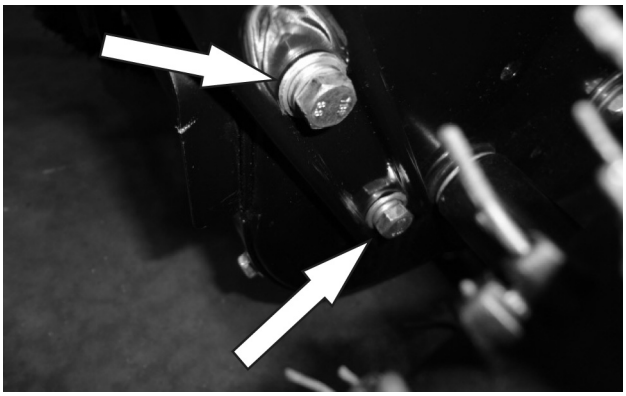
4. Align the holes and connect the crank rods using the Phillips head screw and hex nut.



NOTICE: Make sure all fasteners are tightened before starting the machine.

Handle Assembly

1. Attach the lower handles using four (4) bolts. Each side will require two (2) bolts.

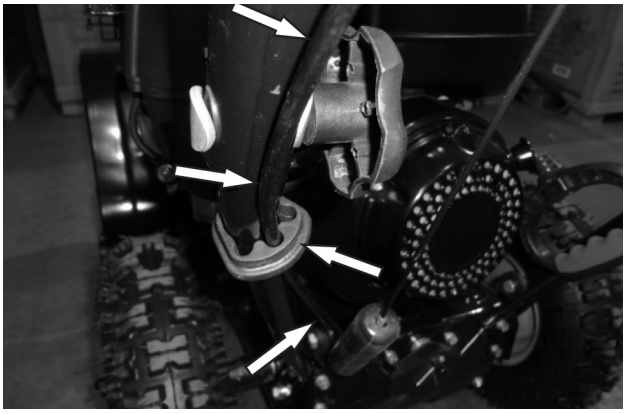


2. Attached the upper handle to the lower handle using four (4) knobs, washers and bolts.

NOTICE: Do not bend or kink the control cables. The cables should be routed under the handle assembly and not wrapped around the handle or knobs. The cables must move freely and not bind.

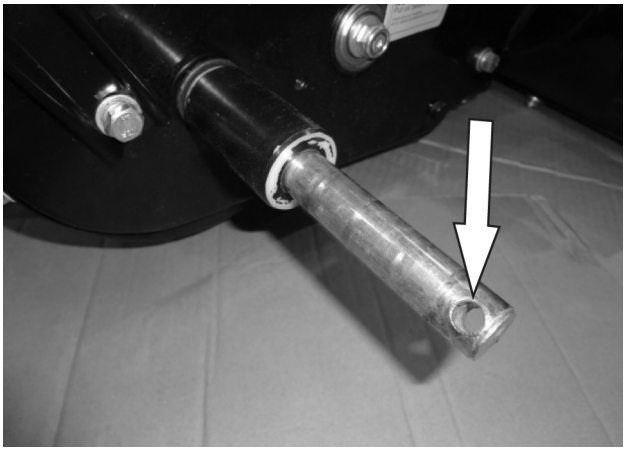
3. Secure the speed control cables to the handle with provided clips.

   Note: Do not secure the auger or drive control cables with the clips.

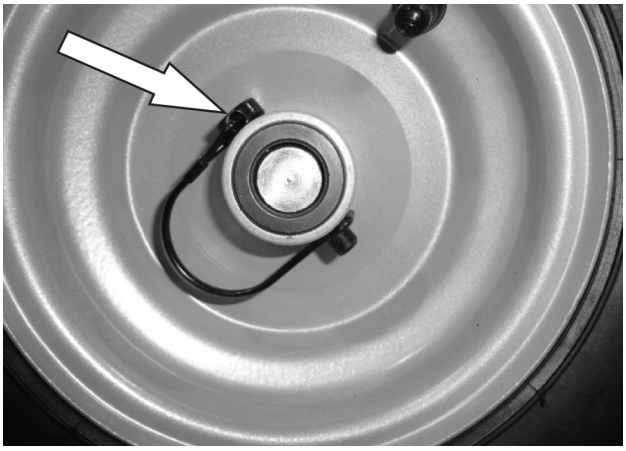


Wheel Installation

1. Raise and support the rear of the snow thrower to allow the installation of the wheels.
2. Slide the wheels onto the axle (one on each side) and align the hole on the wheel hub with the hole in the axle.

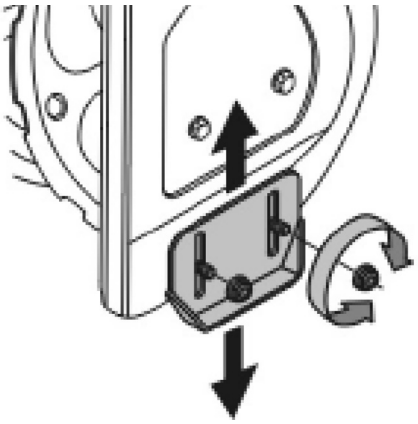


3. Install a retaining pin through each wheel to secure. Insert the pin then pivot the ring over the axel hub.



Skid Shoe Installation and Adjustment

1. Locate the pair of skid shoes from parts bag and remove the bolts.
2. Loosely install the skid shoes using the bolts, washers and hex nuts as shown on each side of the auger housing.



Adjustment of the skid shoes sets the height above the ground at which the auger shave plate operates. For clearing snow from concrete, asphalt, and other smooth surfaces, set the auger shave plate so that the bottom of the plate just scrapes the ground. For clearing snow from gravel, dirt, and other rough surfaces set the auger shave plate slightly above the ground to avoid dirt and gravel from entering the auger. The optimal height of the plate will vary depending on the type of surface being cleared. Surfaces with larger gravel or stones require a higher shave plate setting.

3. Move the Snow Thrower to a solid, smooth, and level surface.

4. Place a spacer board on the ground underneath the auger shave plate between the skid shoes. The thickness of the board should be the same as the height above the ground you wish to raise the auger shave plate. The skid shoes should not touch the board.
5. With the two (2) nuts loose allow the skid shoe to slide to the ground then tighten the nuts to secure the skid shoe.

OPERATION

PLEASE REFER TO ENGINE MANUAL (SEPARATE DOCUMENT) FOR ENGINE OPERATION INSTRUCTIONS.

The following section describes steps to prepare your Snow Thrower for use. If after reading this section, if you are unsure about how to perform any of the steps please call 1-800-791-9458 for customer service. Failure to perform these steps properly can damage your Snow Thrower or shorten its life.

Review the SAFETY section in this manual and the ENGINE manual before operating the engine and snow thrower.

WARNING! Keep the area of operation free from foreign objects that can be thrown by the auger and/or impeller blades. Perform a thorough inspection of the area since some objects may be hidden from view by surrounding snow. If the Snow Thrower hits an obstruction or picks up a foreign object during use, stop the Snow Thrower, remove the obstruction, and inspect it for damage. Repair or replace any damaged parts before restarting and operating you Snow Thrower.

- Keep children, pets, and bystanders away from the area of operation. Be aware that the normal noise of the Snow Thrower when turned on may make it difficult for you to hear approaching people.
- Start your clearing path by throwing snow in a back and forth motion. To clear in the opposite direction, stop your Snow Thrower and pivot it on its wheels to face the opposite direction. Make sure to overlap clearing paths.
- Determine the direction of the wind. If possible, move in the same direction as the wind so that the snow is not thrown against the wind, back into your face and on the just cleared path.

WARNING! DO NOT USE YOUR HANDS TO UNCLOG CHUTE. Stop the motor before removing debris. Use the supplied clean out tool to unclog the chute. Do not walk in front of your running Snow Thrower. Do not direct discharged snow towards bystanders.

- Do not apply additional man-made load to the engine since this may damage the engine.
- Some parts of your Snow Thrower may freeze under extreme temperature conditions. Do not attempt to operate your Snow Thrower with frozen parts. If the parts freeze while your Snow Thrower is in use, stop your Snow Thrower and inspect it for frozen parts. Thaw all parts before restarting and operating your Snow Thrower. Never force parts or controls that have frozen. Never use an open flame of any sort to thaw frozen parts.
- WORKING ON PEBBLES, GRAVEL, OR UNPAVED SURFACES. To avoid throwing loose surface material along with the snow, push down on the handle to raise the scraper at the base of the unit above the pebbles or gravel.

Pre-Operation Inspection - IMPORTANT!!!

Before using your Snow Thrower for the first time, check the following:

- Have you read and followed all setup and operation procedures for the engine as outlined in the ENGINE manual?
- Has the engine been filled with oil to the proper level?
- Are all snow thrower components properly attached and assembled?
- Are there any broken or damaged parts?
- Are all fasteners tight?
- Are the auger, drive and speed controls cables routed properly so that are not kinked and controls operate smoothly?
- Are the auger, drive and speed controls cables adjusted correctly?
- Are the tires inflated to the proper pressure?

NOTICE: If you are unsure about the assembly or condition of any of your Snow Thrower parts, please call customer service department.

Auger and Drive Controls

1. To engage the auger, press down on the auger control handle (left side handle).

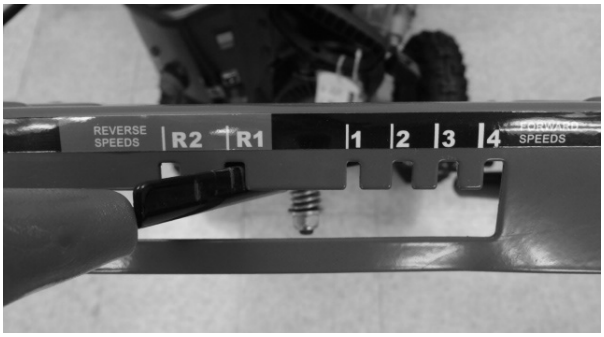
2. To engage the drive, press down on the drive control handle (right side handle). The machine should start moving in the direction and speed that the speed control lever is set to.

3. When finished clearing a snow path, release the auger control handle and the drive control handle.

Note: Release (disengage) the auger and drive control handles before adjusting the drive speed control lever. Never change the drive speed while your snow thrower is moving, it could damage the drive mechanism and void the warranty.

Drive Speed Control Lever

Move the drive speed control lever to the desired speed. There are six (6) settings: four (4) forward speeds and two (2) reverse speeds. 1 is the slowest forward speed and 4 is the fastest forward speed. R1 is the slowest reverse speed and R2 is the fastest reverse speed.

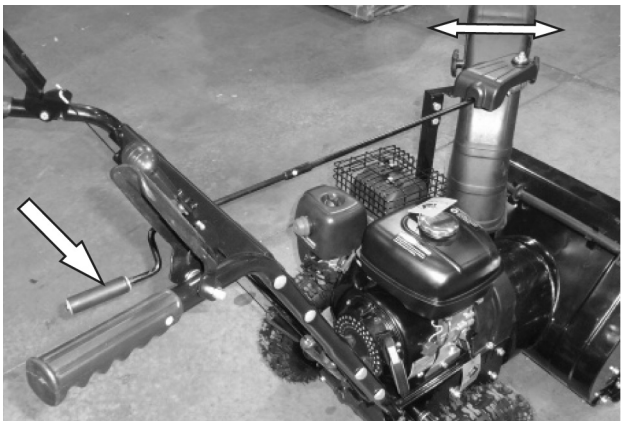


Note: There is no neutral drive setting since the drive control handle must be engaged for movement. Neutral is achieved when the drive control handle is disengaged.

Chute Discharge Direction Adjustment

WARNING - Never direct the snow discharge chute at the operator, bystanders, vehicles or nearby windows. Discharged snow and foreign objects accidentally picked up by the Snow Thrower can cause serious damage and severe bodily injury. Always point the discharge chute in the opposite direction from potential hazards.

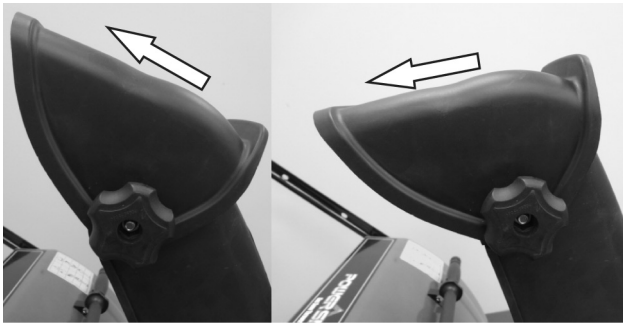
The discharge chute can be adjusted 180º by rotating the chute rotation handle. Rotate the chute rotation handle clockwise to move the discharge chute to the left; counterclockwise to move the chute to the right.



Chute Discharge Angle Adjustment

WARNING! Always disengage the drive and auger control handles before making adjustments. Make sure the augers are stopped and the machine is not moving.

The angle of the chute deflector controls the discharge distance of the snow. Raising the angle will increase the distance. Lowering the angle will decrease the distance.



1. Loosen the knobs on the chute deflector and adjust the chute deflector to the desired angle.
2. Retighten the knobs. Do not over-tighten.

WARNING! An opening between the discharge chute and the chute deflector may allow foreign objects to be picked up by your Snow Thrower and be thrown in the direction of the operator causing severe bodily injury. Do not advance the chute deflector too far forward causing an opening to appear between the deflector and discharge chute. Do not over tighten the knobs on the chute deflector.

OPERATING YOUR SNOW THROWER

Starting

Please refer to ENGINE manual (separate document) for engine operation instructions.

Clearing Snow

Start the engine (see ENGINE manual) once your Snow Thrower has been running outside for several minutes, it is now ready for use. Make sure the path in front of your Snow Thrower is free from people, animals, objects, and all other obstructions except for snow.

Adjust the chute outlet to the desired direction. Turn the chute rotation handle clockwise or counter-clockwise until the desired position is reached.

WARNING! Never direct the chute outlet toward people or animals. While snow may seem harmless, it can contain rocks or other debris that can cause serious injury when projected through the chute.

1. Engage/depress the auger control handle to start the augers and impeller turning.
2. Set the desired direction and speed using the speed control lever.
3. Engage/depress the drive control handle and direct the snow thrower into the snow to be cleared.

NOTICE: Do not change speed positions while the drive is engaged. Disengage the drive control handle BEFORE changing speeds or directions.

If the snow is deeper than the height of the auger, remove it in several steps taking narrower swaths. Make several passes with the auger overlapping the cleared areas and reduce forward speed.

For the best clearing efficiency, clear snow before it melts, refreezes and hardens. Hard packed and wet snow can be very difficult to clear.

Clearing wet heavy snow can be a challenge, depending on ambient temperature, humidity levels, and overall climate conditions including actual snow conditions, there may be no 100% solution as snow may be too wet or compacted to move or throw. Wet snow will tend to clog and stick more to the augers and chute. Keep the auger engaged as much as possible when clearing wet snow to help prevent clogging.

WARNING! If snow is filled with foreign material, damage to the snow thrower may result. Avoid snow with foreign materials.

Stopping

When finished using your Snow Thrower, perform the following steps to shut it down.

1. Engage the auger and impeller for 30 seconds to clear any remaining snow inside your Snow Thrower.

2. Stop the auger by releasing the left control handle.
3. Set the engine switch to the OFF position. See ENGINE manual for stopping procedures.
4. Remove snow from all Snow Thrower surfaces including the auger housing and chute areas.

Clearing Restrictions

If the snow discharge chute or auger housing becomes clogged STOP the engine, and make sure that all rotating parts have come to a complete stop. Remove the spark plug cap from the spark plug.

Use the supplied snow clean out tool to clear the obstruction. After unclogging, wipe the tool clean, and place it in the holder on top of the auger housing.

MAINTENANCE

WARNING! Never perform maintenance while your Snow Thrower is running. Turn OFF the engine before performing any maintenance tasks on your Snow Thrower.

Proper maintenance of your Snow Thrower will help prolong its life. Please perform the following maintenance procedures as required.

Please read the ENGINE manual for engine maintenance procedures.

Do not attempt to repair your Snow Thrower unless you have the proper tools and instructions for disassembly and repair.

Check the bolts at frequent intervals for proper tightness to ensure that the equipment is in safe working condition.

After each snow removal session, run the Snow Thrower for a few minutes to prevent the collector/impeller from freezing. Stop the engine, wait for all revolving parts to stop completely, and wipe residual ice and snow off the unit. Rotate the chute rotation handle several times to remove any excess snow.

Maintenance Schedule

ITEM	FUNCTION	FREQUENCY
Auger & Impeller	Clear Jams	As necessary
Tires	Check Pressure	Before each use
Engine Oil	See Engine Manual	
Spark Plug		
Fuel Tank		
Drive & Auger Cables	Adjust tension	As necessary
Shear Pins	Replace	As necessary

Maintenance Procedures

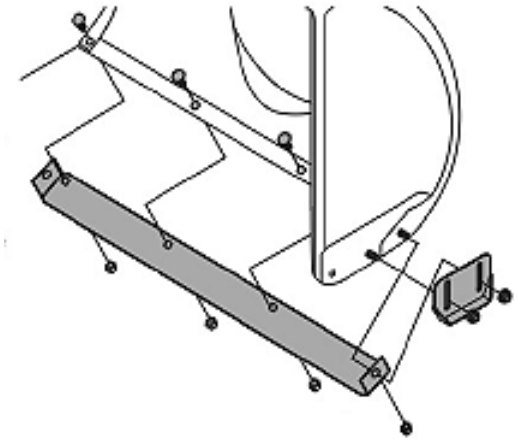
Tire Inflation

Before each use of your Snow Thrower, check the tire pressure. The pressure in each tire should be in the range of 20-24 psi for the best performance. The pressure can be checked using an ordinary tire pressure gauge. Fill the tires using an small or pressure regulated air compressor.

WARNING! DO NOT OVER-INFLATE THE TIRES. Over-inflating could cause a tire to burst and cause severe bodily injury.

Shave Plate Replacement

Remove both skid shoes and hardware including carriage bolts and nuts which attach shave plate to snow thrower housing. Reassemble new shave plate, making sure heads of the carriage bolts are to the inside of the housing.



Auger or Impeller Jams

WARNING! The auger and impeller rotate at fast speeds which can cause harm or even amputation to a person's body parts. Even if you do not see the auger or impeller rotating, it may start at any time if the engine is running.

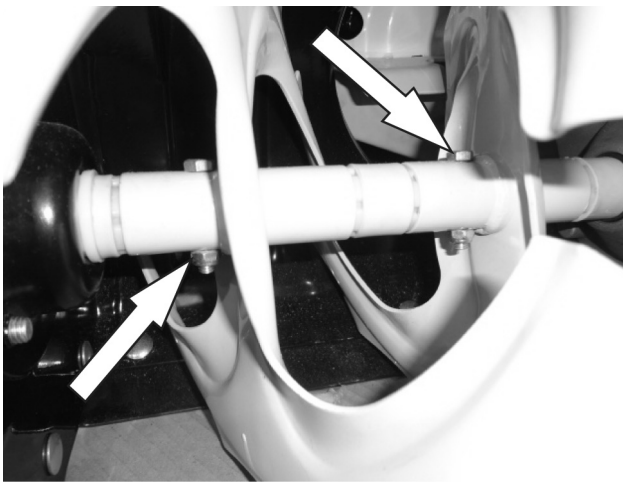
The chute clean-out tool is fastened to the top of the auger housing with a mounting clip and a cable tie at the factory. Cut the cable tie before operating the snow thrower.

1. Always turn OFF the engine before attempting to clear any clogs or jams.
2. Keep hands and feet away from rotating parts while the engine is running.
3. Do not wear loose fitting clothing that can become entangled in rotating parts.
4. Wait until the auger and impeller have come to a full stop.
5. Clear any visible jams using the clean out tool attached to your machine.

WARNING! DO NOT try to clear jams with your hands or feet.

Auger Shear Pin Replacement

Shear pins are used to attach the auger shaft to the auger blades. A clog or jam in the augers may cause one or multiple shear pins to break. The shear pins are a safety mechanism and designed to break under high load or impact to protect the auger drive system from damage. Replacement shear pins and nylon locknuts are provided with your snow thrower. For additional replacement shear pins, please call the customer service department.



1. Turn off the engine and wait for all moving parts to come to a complete stop.

Remove any remnants of the broken shear pin. It may be necessary to unscrew the nut from the broken shear pin and drive out the broken pin.

2. Insert a new shear pin through the hole in the auger shaft and tighten using the shear pin hex nut. Do not over-tighten the hex nut.

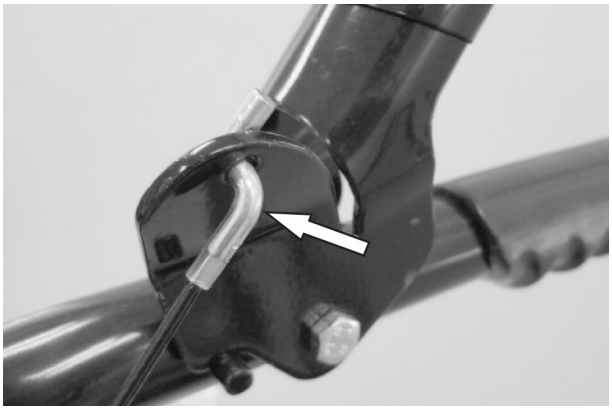
NOTICE: Never replace the shear pins with standard pins or fasteners. Damage may occur to the snow blower and drive systems.

Drive Control Cable Tension Adjustment

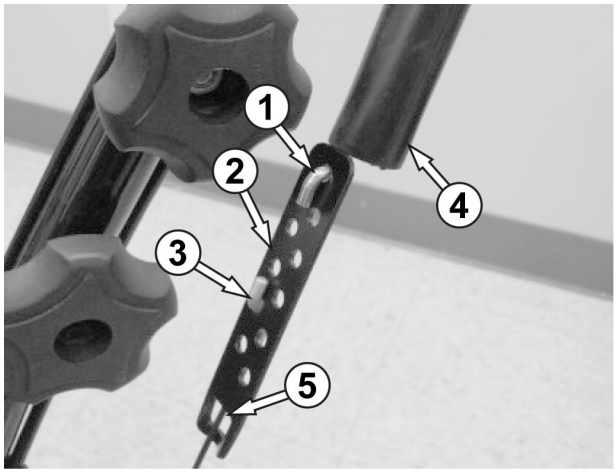
WARNING! Entanglement Hazard - Before performing any adjustment procedures, make sure the engine is off and remove the spark plug wire from the spark plug to ensure the engine cannot accidently start. Never adjust cable tension with the engine running.

The drive control cable is located on the right side (when standing behind the snow blower) and is made up of an upper and lower cable connected by an adjustment plate. The adjustment plate is located in-line with the cable below the control handle and is covered by a black plastic slip cover. The adjustment plate is used to adjust the drive control cable drive wheel friction tension.

1. Stop the engine.
2. Disconnect the upper cable from the drive control handle.

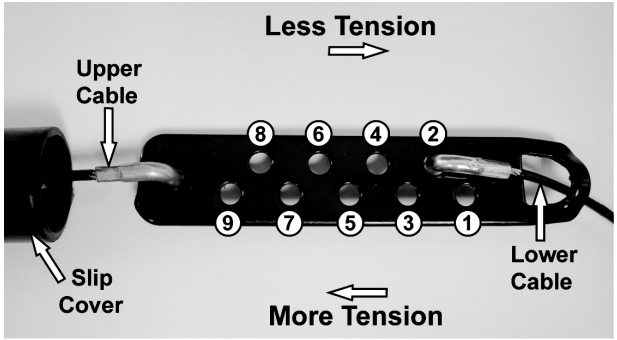


3. Slide up the slip cover to access the adjustment plate.



1 – Upper Drive Control Cable (Always in upper center hole)
2 – Adjustment Plate
3 – Lower Drive Control Cable
4 – Slip Cover
5 – Adjustment Plate Lower Cable Opening

4. Adjustment is made by changing the position of the lower cable in the adjustment plate holes (1 to 9). Only move the lower cable diagonally one hole at a time from its original position.



Note: The upper cable end must be in the upper single center hole of the adjustment plate. Do not change the position of the upper cable.

5. Connect the upper cable to the control handle.
6. Start the engine and engage the drive control handle to test the operation of the drive engagement.

Note: With the drive control handle at the full released position, the cable should be barely tight. Some slack in the cable may be required to ensure the drive control is not engaging the drive friction wheel. There should be no drive movement with the drive control handle released. If the drive is engaged when the drive control handle is released, loosen the cable tension by readjusting the cable as necessary. Do not over tension the cable.

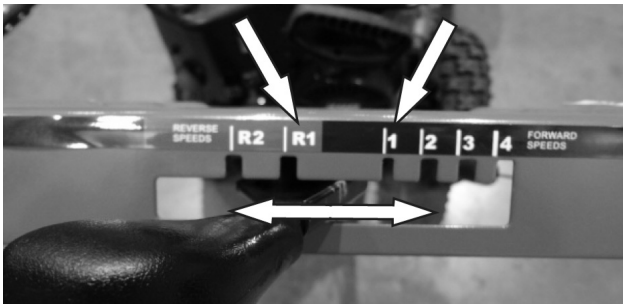
Drive Speed Control Cable Adjustment

WARNING! Entanglement Hazard - Use caution when performing the speed control cable adjustment.

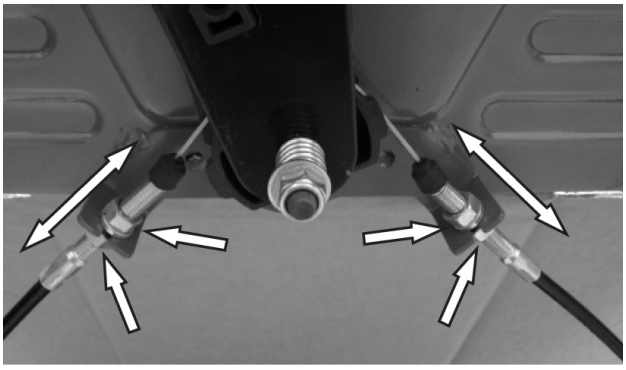
The speed control lever is connected to two cables that work in tandem to control machine speed and direction. As the speed control lever is moved from forward to reverse gears (right to left) one cable is pulled and one is pushed.

Depending on if the cable setting is biased towards forward or reverse, adjustment of the cables will vary.

To adjust the cables one cable should be moved up and the other down equally in their respective brackets until there is a positive direction change when the lever is shifted between F1 and R1. The middle position between these two settings is neutral (there is no actual neutral "notched" position on the control panel)



1. With the engine running engage the drive control handle and move the speed control lever between F1 and R1 to determine which way the cables need to be adjusted. Release the drive control handle when shifting between gears.
2. Loosen the jam nuts on each cable (only one or two threads) and move each cable up and down as required until a positive direction change is achieved when the lever is shifted between F1 and R1. This may take multiple attempts to find the exact setting.



3. Tighten the cable jam nuts once the proper setting has been achieved.

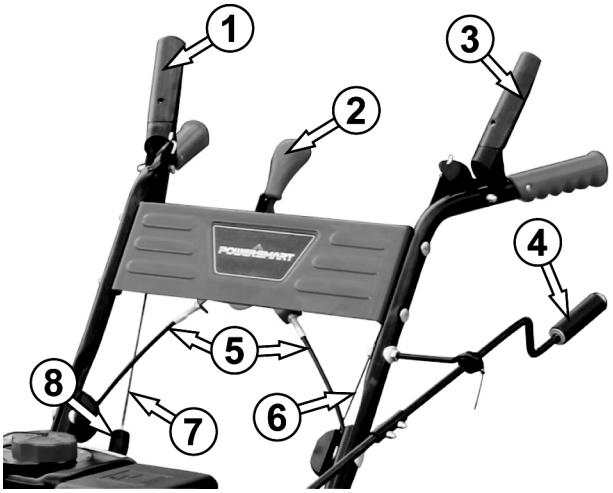
Auger Belt Tension Adjustment

WARNING! Entanglement Hazard - Before performing any adjustment procedures, make sure the engine is off and remove the spark plug wire from the spark plug to ensure the engine cannot accidently start. Never adjust belt tension with the engine running.

Note: During operation the augers turn at a slower speed than the impeller, this is normal. The augers are used to chop and cut the snow and direct it into the impeller which is rotating at a high speed to throw the snow up and out of the chute.

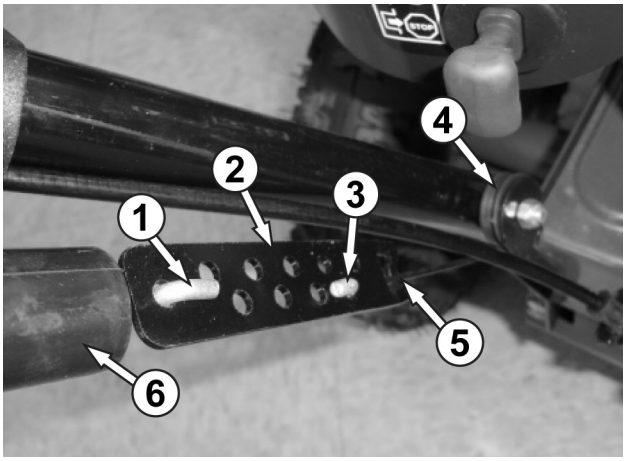
Over time, the auger cable tension may loosen and or the auger belt may stretch. The auger cable will require periodic adjustment to compensate for these changes. Ideally, the cable should just be barely tight when the auger handle is in the released (disengaged) position.

Note: The proper operating tension for a typical Vbelt drive is - the lowest tension at which the belt will not slip under a loaded condition.



1 – Drive Control Engagement Handle
2 – Drive Speed Control Lever
3 – Auger Control Engagement Handle
4 – Chute Rotation Crank Handle
5 – Drive Speed Cables
6 – Auger Control Cable
7 – Drive Control Cable
8 – Drive Control Cable Adjustment Plate Slip Cover

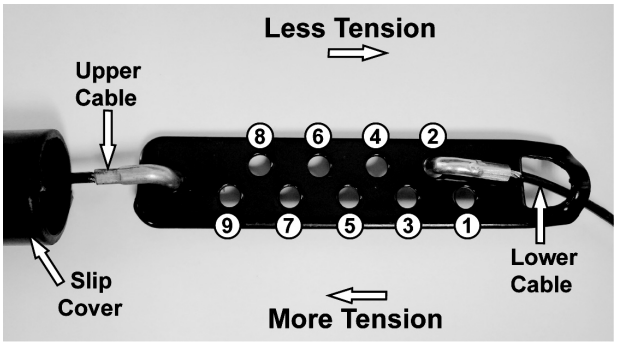
The auger cable is located on the left side (when standing behind the snow blower) and is made up of an upper and lower cable connected by an adjustment plate. The adjustment plate is located in-line with the cable below the control handle and is covered by a black plastic slip cover. The adjustment plate is used to adjust auger belt tension.



1 – Upper Auger Cable (Always in upper center hole)
2 – Adjustment Plate
3 – lower Auger Cable
4 – Cable Pulley
5 – Adjustment Plate Lower Cable Opening
6 – Slip Cover

1. Stop the engine.
2. Disconnect the upper cable from the auger control handle.

3. Slide up the slip cover to access the adjustment plate.



4. Adjustment is made by changing the position of the lower cable in the adjustment plate holes (1 to 9). Only move the lower cable diagonally one hole at a time from its original position.

   Note: The upper cable end must be in the upper single center hole of the adjustment plate. Do not change the position of the upper cable.

5. Connect the upper cable to the control handle.
6. Start the engine and engage the auger to test the operation of the auger.

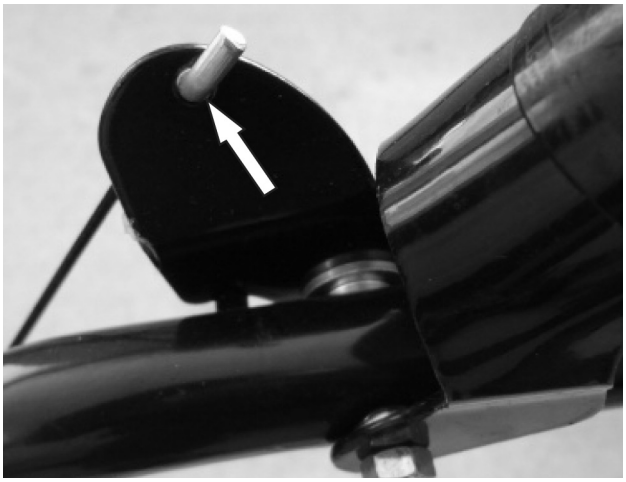
   Note: With the auger control handle at the full released position, the cable should be barely tight. Some slack in the cable may be required to ensure the auger pulley tension pulley is not engaging the belt. There should be no auger movement with the auger handle released. If the auger is turning when the auger handle is released, loosen the belt tension by readjusting the cable as necessary. Do not over tension the cable.

Auger Belt Removal

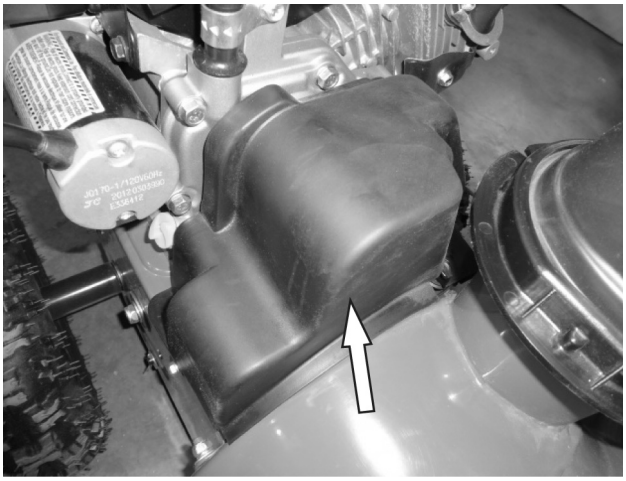
WARNING! Entanglement Hazard - Before performing any service procedures, make sure the engine is off and remove the spark plug wire from the spark plug to ensure the engine cannot accidently start.

Note: Record component position before disassembly, to assist in reassembly.

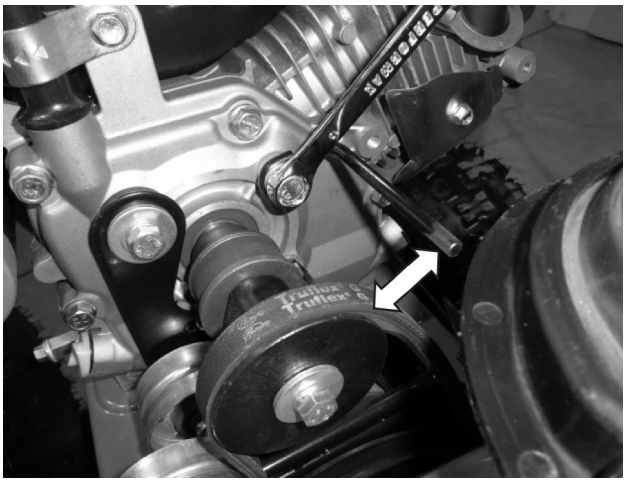
1. Disconnect the upper cable from the auger control handle.



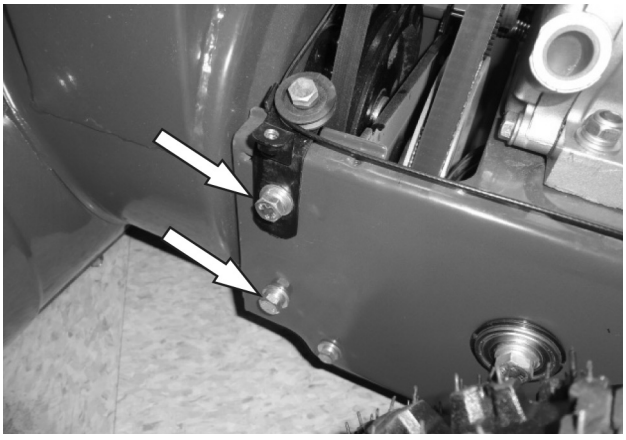
2. Remove 2 hex head screws and remove belt cover.



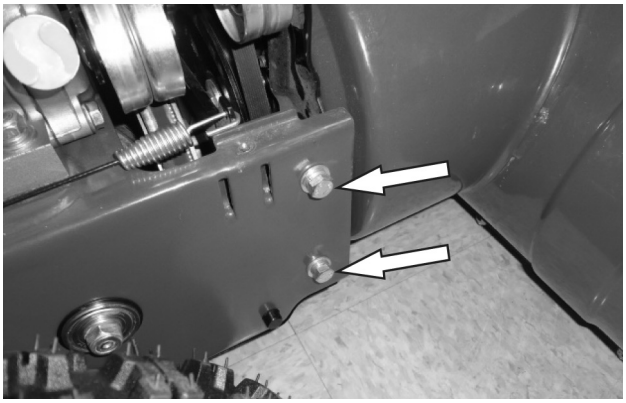
3. Loosen the belt guide pin hex head screw (installed on engine crankcase) and rotate the pin away from the pulley.



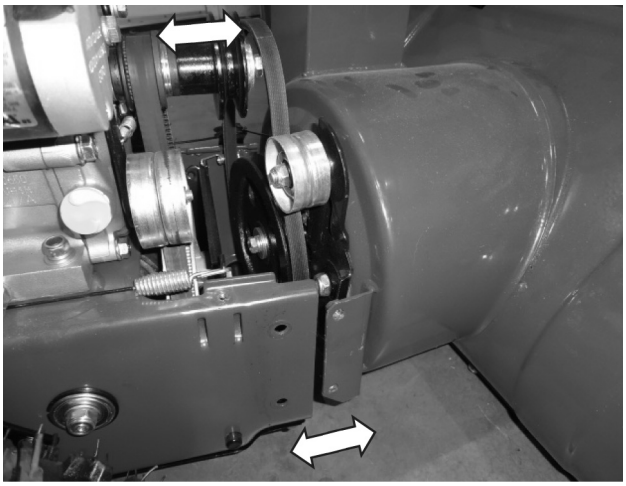
4. Left Side - Loosen the hex screws attaching the auger housing to the main frame.



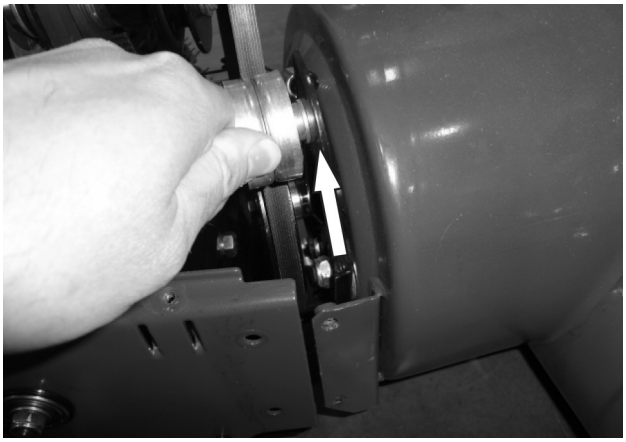
5. Right Side - Remove the hex screw, lock washers and flat washers attaching the auger housing to the main frame.

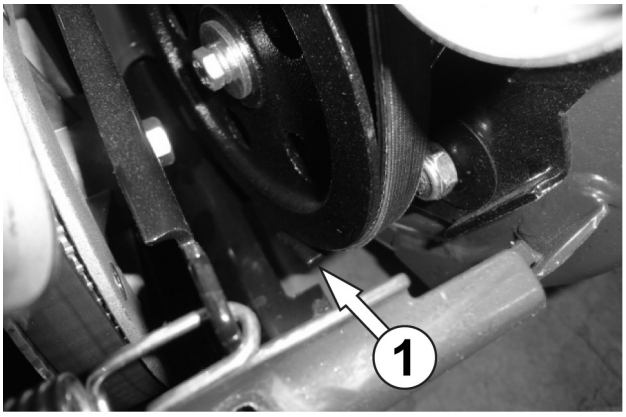


6. Remove the belt from the drive pulley while pulling the right side of the auger housing away from the main frame just enough to access the belt and auger pulley.



7. Push the auger tension pulley arm to move the auger brake, away from the belt to allow removal of the belt.





1 – Auger Brake

8. Remove the auger belt.

Auger Belt Installation

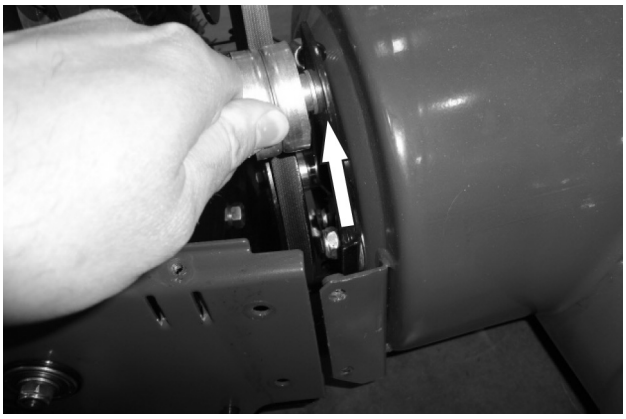
WARNING! Entanglement Hazard - Before performing any service procedures, make sure the engine is off and remove the spark plug wire from the spark plug to ensure the engine cannot accidently start.

NOTICE: Before installing the auger belt, see Auger Belt and Related Component Inspection and repair or replace any components as required.

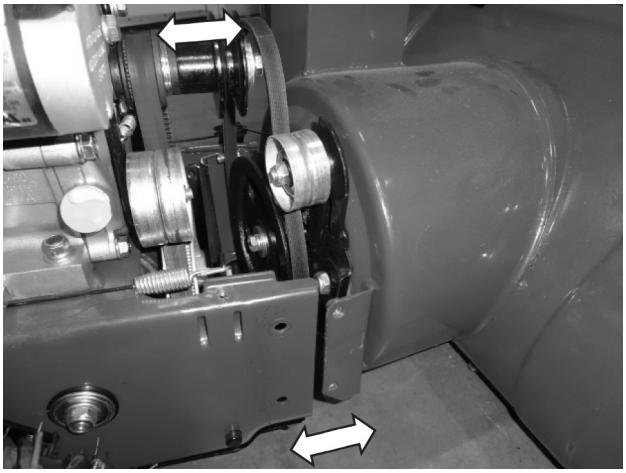
1. Inspect the new belt to ensure it is the correct size and type.

- Original - Gates Truflex G 4LXP655
- Alternate - MTD 954-0219

2. Push the auger tension pulley arm to move the auger brake to allow access for installation of the belt into the auger pulley.



3. Route the belt to the inside of the tension pulley and install the auger belt onto the drive pulley while pulling the auger housing into position with the main frame.



4. Install and/or tighten the hex screws attaching the auger housing to the main frame. Tighten all fasteners securely, do not over tighten.
5. With the belt installed on both pulleys and tension pulley in position, move the belt guide pin to within 3/16 to 3/8 in. from the belt seated in the pulley and tighten the pin in position.

Note: The belt guide pin helps keep the belt in the pulley when the belt is disengaged. The pin should not be tight to the belt. The pin should be loose enough to allow the belt to spin freely but not allow the belt to jump off the pulley.

6. Connect the lower auger cable to the cable adjustment plate.
7. Adjust auger belt tension; see Auger Belt Tension Adjustment.

WARNING! Ensure the belt cover is installed and all safety guards are in place before the engine is started and at all times when the engine or machine are operating.

8. Install belt cover using 2 hex head screws.Make sure the auger cable is routed outside the belt cover as shown.

NOTICE: After initial belt installation and adjustment, re-adjustment of the belt is recommended after a period of operation. Belt tension should be checked periodically to ensure proper tension is maintained.

A loose belt will cause:

- Premature belt wear / damage /cracking /fraying
- Belt slipping ("squealing may also be heard")
- No or erratic/slow auger operation - poor performance

A tight belt will cause:

- Premature belt wear / damage / breaking/stretching
- Belt overheat / burning
- Loss of auger engagement control (always engaged)
- Tension pulley damage
- Pulley bearing damage

Auger Belt and Related Component Inspection

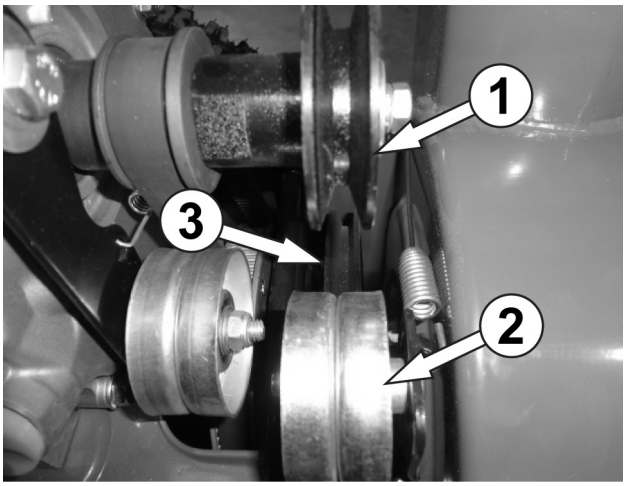
When replacing your snow blower auger belt it is important to determine the cause of the failure (if applicable) and take corrective action to avoid repeated failure.

Inspect the belt:

- Correct size and type
- Fraying or peeling apart
- Missing pieces
- Cracks and tears
- Burning
- Uneven wear patterns
- General damage
- Foreign material on belt, oil, grease, dirt etc.

Inspect the auger pulleys:

- Broken sheave or hub
- Loose or missing mounting bolts
- Bent or "out-of-round" condition (pulley not spin true on shaft)
- Misaligned pulleys



1 – Drive Pulley
2 – Tension Pulley
3 – Auger Pulley

- Foreign material on pulleys, oil, grease, dirt, etc.
- Misaligned tension pulley
- Tension pulley loose or damaged
- Tension pulley and arm assembly operation
- Does the tension arm move freely both engage and disengage directions without binding?
- Misaligned tension pulley, the pulley should move parallel to the belt centered to the belt
- Check return spring operation and tension

Inspect the auger engagement handle and cable:

- Cable and connection damage
- Free movement (from engage to disengaged positions)
- Binding or improperly routed cable
- Cable pulley(s) damage, misalignment and binding
- Cable adjustment plate damaged or improper installation
- Handle damaged or binding at pivot

Storage

WARNING! Never store your Snow Thrower for extended periods of time with fuel in the tank. Fuel stabilizer can be added to the fuel to extend its shelf life for storage.

Store the unit, in a locked, dry place out of the reach of children to prevent unauthorized use or damage. Cover loosely with a tarp for added protection.

Cleaning

1. To clean your Snow Thrower, use a damp cloth and mild detergent on the surfaces only. Never get soap or water inside the working mechanisms of your Snow Thrower.

   Note: Do not clean with water. Water will freeze due to low temperature and damage the machine.

2. Clean the Snow Thrower of snow and ice buildup before storing or transporting. Be sure to secure the unit while transporting.
3. Inspect the Snow Thrower carefully for worn, loose, or damaged parts. Check connections and screws and tighten if necessary.

TROUBLESHOOTING

Problem		Possible Causes		Remedy
WARNING - Before attempting to make any inspections, repairs or adjustments, stop the engine, wait for all moving parts to stop moving and carefully disconnect the engine spark plug wire. If tipping or turning the snow blower is required for any inspection or repair, first wait until the engine is cool to the touch and then drain the engine of all fuel and oil into suitable containers and store or dispose of in a proper manner.				
Engine Fails to Start (Engine cranks over)	1	Engine ignition switch in OFF position	1	Position engine ignition switch to ON
	2	Spark plug wire disconnected	2	Connect wire to spark plug
	3	Faulty spark plug	3	Clean, adjust gap, or replace spark plug
	4	Engine flooded with fuel	4	Discontinue choke or primer use, clean or replace spark plug.
	5	Engine oil level low	5	Check oil level on dipstick, add oil as needed. See page 13 engine manual. Do not over fill with oil. Note: Only use 5W-30, 4-stroke automotive detergent oil with an API SERVICE rating of SJ or higher. Engine oil capacity 21 oz. (0.621 liter). The use of automotive synthetic oil is acceptable.
	6	Choke not in CLOSED position	6	Move choke to CLOSED position, after engine starts slowly move to OPEN position as engine speed and operation stabilizes at the set rpm. If engine still does not start move to half choke and crank engine.
	7	Engine not primed with fuel	7	Prime engine
	8	Fuel tank empty	8	Fill tank with clean, fresh gasoline
	9	Water in fuel	9	Empty fuel tank & carburetor, refill with fresh, clean gasoline
	10	Fuel incorrect, old or stale, will not ignite	10	Empty and clean fuel tank & carburetor, refill with fresh, clean gasoline. (Note: Fuel may become stale after 30 days in some cases)
	11	Blocked or clogged fuel system or line	11	Clean fuel system or line
	12	Fuel shut-off valve in OFF position	12	Turn fuel shut-off valve to ON position
	13	Internal engine problem	13	Contact customer service
Engine recoil starter will not pull out / hard to pull	1	Frozen recoil starter or engine too cold to turn over	1	Move snow blower to warm space and allow it to warm up.
Engine Overheats	1	Cooling air flow restricted to engine	1	Remove air flow restrictions from engine
	2	Low oil level	2	Check oil level on dipstick, add oil as needed. See page 13 engine manual. Do not over fill with oil. Note: Only use 5W-30, 4-stroke automotive detergent oil with an API SERVICE rating of SJ or higher. Engine oil capacity 21 oz. (0.621 liter). The use of automotive synthetic oil is acceptable.
Engine runs erratic, stalls or seems low on power	1	CHOKE in CLOSED or partial CLOSED position	1	Move CHOKE lever to OPEN
	2	Water in fuel	2	Empty fuel tank & carburetor, refill with fresh, clean gasoline
	3	Fuel incorrect, old or stale	3	Empty and clean fuel tank & carburetor, refill with fresh, clean gasoline. (Note: Fuel may become stale after 30 days in some cases)
	4	Blocked or clogged fuel system or line	4	Clean fuel system or line
	5	Carburetor is in need of cleaning	5	Clean fuel system and carburetor
	6	Spark plug wire loose	6	Connect and tighten spark plug wire
	7	Faulty spark plug	7	Clean, adjust gap, or replace spark plug , see Engine Operator's manual
	8	Gas cap vent hole plugged	8	Remove ice and snow from gas cap.
	9	Engine oil over filled	9	Drain oil to proper level. Oil should not be above the top 2 threads of LOWER fill plug.
	10	Engine oil level low or empty	10	Check oil level on dipstick, add oil as needed. See page 13 engine manual. Do not over fill with oil. Note: Only use 5W-30, 4-stroke automotive detergent oil with an API SERVICE rating of SJ or higher. Engine oil capacity 21 oz. (0.621 liter). The use of automotive synthetic oil is acceptable.
	11	Engine overheating	11	See "Engine Overheats"
Engine smokes excessively	1	Engine oil over filled	1	Drain oil to proper level. Oil should not be above the top 2 threads of LOWER fill plug.
	2	Internal engine problem	2	Contact customer service

Drive System				
No forward or reverse drive movement when drive handle engaged	1	Drive control cable loose, broken or binding	1	Repair or adjust drive control cable and adjust tension, see Auger and Drive Cable Adjustment
	2	Drive belt loose or damaged	2	Check drive belt tension pulley for damage or incorrect tension, repair as necessary. Replace drive belt.
	3	Friction drive wheel is worn or damaged	3	Replace friction drive wheel
	4	Friction drive wheel wet or slipping	4	Allow snow blower to dry and or warm up or adjust drive cable tension as necessary
	5	Wheels locked, wont move	5	Release drive control handle then pull machine backward to try and unlock axle. If axle will not unlock, check to ensure drive friction plate is not engaged to drive friction wheel, also check axle drive gear, axle and bushings for damage or binding.
	6	Wheel to axle pins broken or missing	6	Replace pins attaching wheels to axle
Drive speed control stuck in gear or wont change gears	1	Speed control lever loose or damaged, not moving speed control cables	1	Check speed control lever and cables for damage or loose or missing parts. Repair or replace parts as needed, ensure pivot stud spring tension is correct, adjust pivot nut spring tension as needed.
	2	Speed control cables loose, damaged or binding	2	Repair, adjust or replace as necessary
	3	Drive speed lower control lever or friction wheel damaged or mechanically binding	3	Inspect lower control lever and mechanical connection to friction drive wheel and slide shaft for damage or binding.
Drive speed control allows only one direction forward or reverse	1	Speed control cables misadjusted, loose, damaged or binding	1	Check speed control lever and cables for damage or loose or missing parts. Repair or replace parts as needed. Adjust drive speed control cables, see Drive Speed Control Cables Adjustment
Drive engaged when drive control handle released	1	Drive control cable binding, wont release	1	Repair, replace cable as necessary
	2	Friction drive wheel return spring broke or missing	2	Replace spring, adjust cable as necessary
Auger System				
Auger not rotating when auger control handle engaged or Not blowing snow or Poor snow blowing performance	1	Chute assembly clogged	1	Clean chute and inside of auger housing with clean-out tool
	2	Auger shear bolts broken	2	Replace shear bolts. Check each auger blade shear bolt.
	3	Foreign object in auger or impeller causing auger to stop without shearing pins	3	Remove object from auger or impeller areas
	4	Auger belt loose, slipping, worn or damaged	4	Replace auger belt or adjust auger control cable tension, see Auger and Drive Cable Adjustment
	5	Auger belt tension cable loose, damaged or binding	5	Repair, adjust or replace as necessary
	6	Auger blade(s) damaged or bent	6	Replace auger blade(s)
	7	Auger gearbox mechanical damage, auger drive system not rotating freely (binding)	7	Check bearings, bushings and all system parts for damage or mechanical binding. Repair or replace as necessary using proper lubrication
	8	Impeller damaged	8	Replace impeller
	9	Impeller not connected to impeller shaft, impeller or shaft damaged or roll pins broken	9	Replace roll pins or impeller as necessary
	10	Inadequate amount of snow	10	Ingest an adequate amount of snow to allow snow to compact enough to be moved through augers and into impeller.
	11	Snow too heavy or wet or has other material in it	11	Depending on ambient temperature, humidity levels, and overall climate conditions including actual snow conditions, there may be no solution as snow may be too wet or compacted to move or throw. If snow is filled with foreign material, damage to the snow thrower may result. Avoid snow with foreign materials.
	12	Forward speed too fast while blowing snow, overload	12	Slow and reduce snow ingestion, allow engine to maintain it's maximum rpm.
	13	Engine not running at rated speed under load	13	Have engine inspected and RPM tested under load to ensure engine is operating at the recommended RPM. Check for machine mechanical binding causing engine to not run at rated RPM.
Auger belt broken, or repeated failure	1	Auger tension pulley arm return spring broken or missing	1	Replace tension arm return spring
	2	Auger tension pulley arm stuck or binding	2	Repair or replace tension arm as necessary
	3	Auger tension pulley arm or pulley misaligned or damaged	3	Repair, replace or align tension arm and or pulley as necessary
	4	Foreign material on pulleys and belt, oil, grease, dirt etc.	4	Clean belt and pulleys as necessary, replace belt if necessary
	5	Auger pulleys misaligned, loose, damaged or bent	5	Replace or align pulleys as necessary
	6	Incorrect or damaged auger belt	6	Replace with correct size and type belt
	7	Incorrect auger belt tension	7	Adjust auger cable tension, see Auger and Drive Cable Adjustment
	8	Auger belt guide pin not adjusted	8	Adjust belt guide pin to within 1/8 to 3/16 in. from pulley. (Guide pin keeps belt in pulley when disengaged)
Auger rotating when auger control handle released	1	Auger cable tension too tight, belt to tight	1	Adjust auger cable tension, see Auger and Drive Cable Adjustment
	2	Auger tension pulley arm return spring broken or missing	2	Replace tension arm return spring
Excessive Vibration	1	Loose or damaged parts, auger blades bent or impeller damaged or binding	1	Stop engine immediately and disconnect spark plug wire. Check and tighten all bolts and nuts. Inspect auger and impeller for damage or foreign objects restricting rotation. If vibration continues, stop operation and contact service center or call Amerisun customer service for assistance.

WARRANTY

ONE YEAR WARRANTY

WARRANTY

For one year from date of retail purchase within U.S.A., the manufacturer will, at its option, repair or replace, for the original purchaser, free of charge, any part or parts found to be defective in material or workmanship. This warranty covers units which have been operated and maintained in accordance with the owner's instructions furnished with the unit, and which have not been subject to misuse, abuse, commercial use, neglect, accident improper maintenance or alteration.

Personal use: THE FOREGOING PARAGRAPHS CONSTITUTE THE MANUFACTURER'S ENTIRE WARRANTY WITH RESPECT TO ANY PRODUCT PURCHASED AND USED FOR PERSONAL FAMILY, HOUSEHOLD/RESIDENTIAL PURPOSES, AS DISTINGUISHED FROM COMMERCIAL USAGE.

Commercial use: ALL APPLICATIONS OTHER THAN PERSONAL USE AS OUTLINED ABOVE, ARE CONSIDERED COMMERCIAL USAGE.

To Obtain Service: Contact the Amerisun customer service department 1-800-791-9458 or e-mail support@amerisuninc.com. Also visit Amerisuninc.com for additional information.

Other Warranties: All other warranties, express or implied, including any implied warranty of merchantability is limited in its duration to that set forth in this express limited warranty. The provisions as set forth in this warranty provide the sole and exclusive remedy of the manufacturer's obligations arising from the sale of its products. The manufacturer will not be liable for incidental or consequential loss or damage. Some states do not allow exclusions of incidental or consequential damages, so the above exclusions may not apply in all states. This warranty gives you specific legal rights in your state, which vary from state to state.